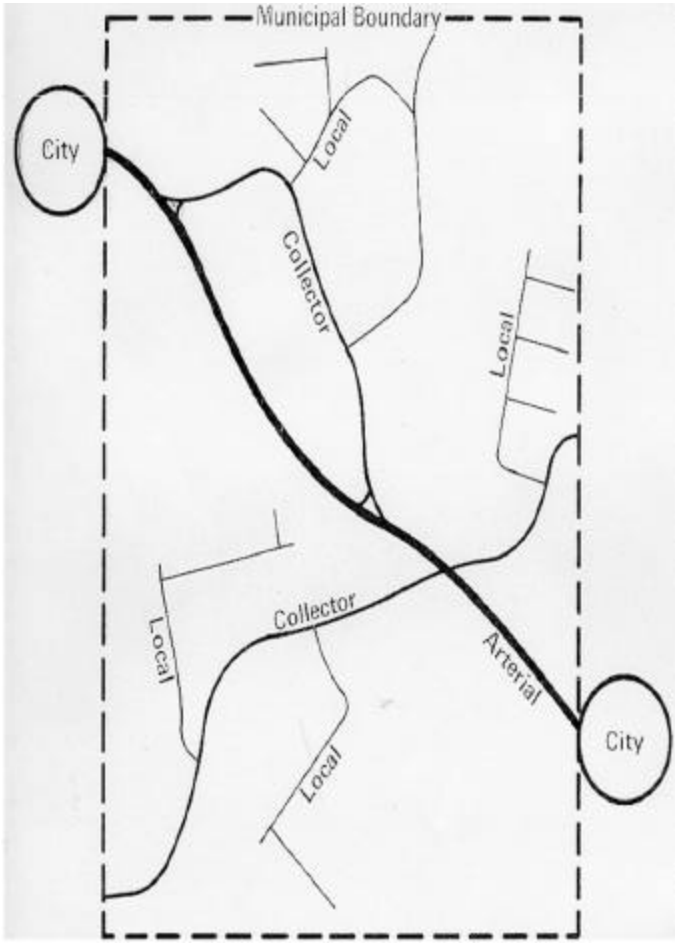
MaineDOT maintains, supports, and invests in a wide range of transportation assets, from Maine's highway and bridge network to the ferry service, passenger and freight rail lines, and shared-use paths. This section reports on these assets and their condition.

3.1 Highways

There are 22,700 miles of public roads in the State of Maine. Of this mileage, 13,893 miles are town ways; 8,327 miles are state roads, and 447 miles are miscellaneous roadways (including state and federal reservation roadways and the Maine Turnpike).

Highway Functional Classifications



Arterial Highways provide for substantial Statewide or interstate through travel for large traffic volumes at generally relatively high speeds with minimal interference. Depending on their location and function, arterials are categorized as Rural or Urban and as Principal or Minor.

Rural Major Collector Highways are outside federally designated urbanized areas and serve as important intracounty travel corridors that connect consolidated schools, shipping points, important agricultural areas, etc. with local roads.

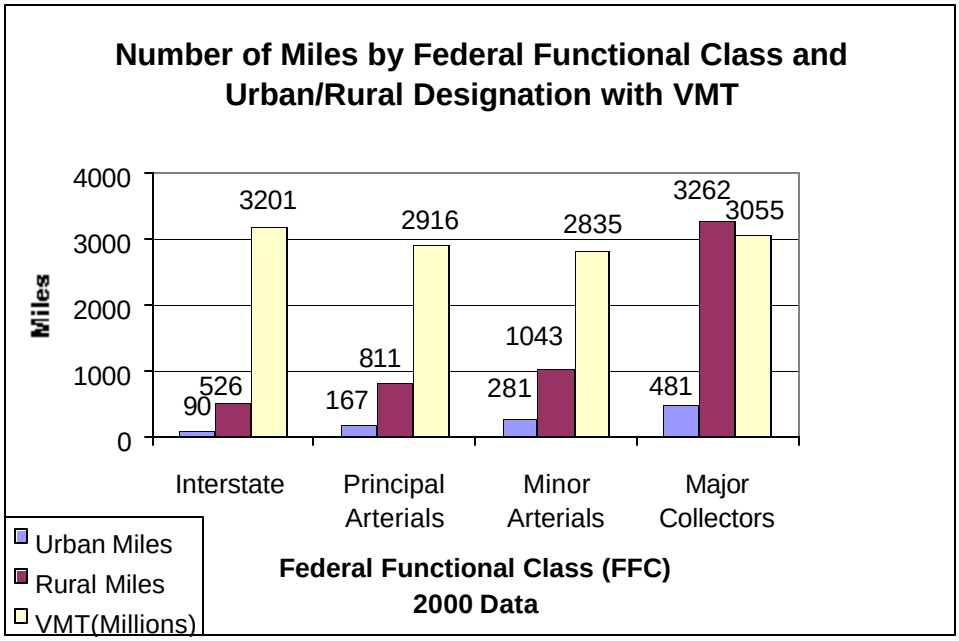
Urban Collectors are collector highways inside federal urbanized areas

Minor Collectors provide service to smaller communities and link locally important traffic generators with arterial and major collector highways.

Local Roads provide access to adjacent land and provide service to travel over relatively short distances.

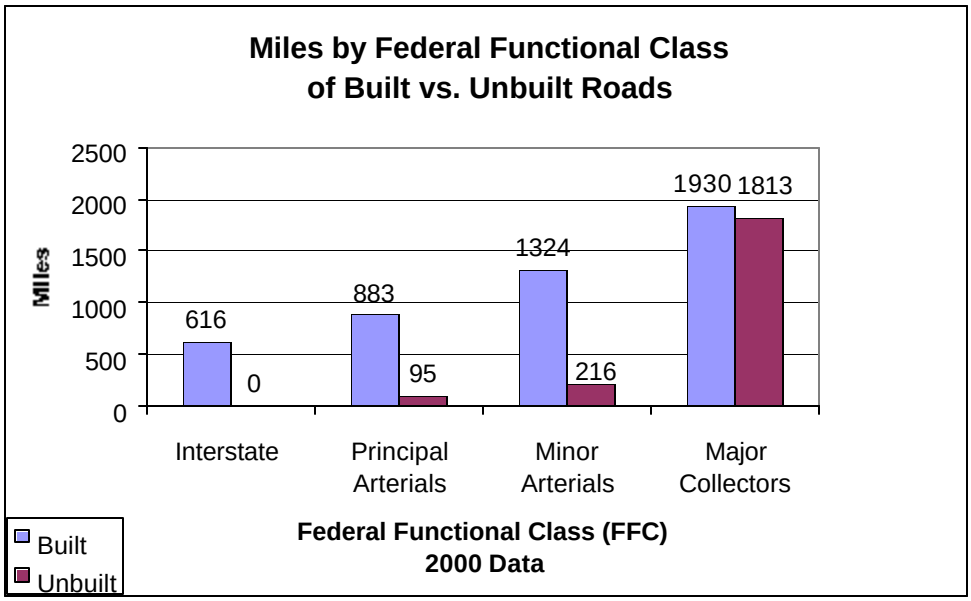
MaineDOT collects pavement data on nearly 9,000 miles of this network, as detailed in the chart below. This data is used primarily to support the Department's Pavement Preservation Program. It focuses on major collectors and higher classifications of roadways, which also carry the majority of all traffic. As an example, arterial highways make up 12% of the state-maintained network, yet they carry more than 60% of the traffic.

Figure 3.1.1



Note: Interstate mileage includes northbound and southbound lanes of all interstates in Maine (I-95, I-295, I-395). It does not include Maine Turnpike Authority mileage.

Figure 3.1.2



3.1.1 Built vs. Unbuilt

Maine's roadway system is split into two distinct categories: built and unbuilt. A built road is defined as one that has been constructed to a modern standard, usually post-1950. Modern standards include adequate drainage, base, and pavement to carry the traffic load, and adequate sight distance and width to meet current safety standards. An unbuilt road is defined as a roadway section that has not been built to modern standards; it may have inadequate drainage, base, and pavement, sight distance and/or width.

This road has adequate lane width for the given traffic volume, paved shoulders, good sight distance, modern guardrail and curb to protect steep slopes, and good drainage features.

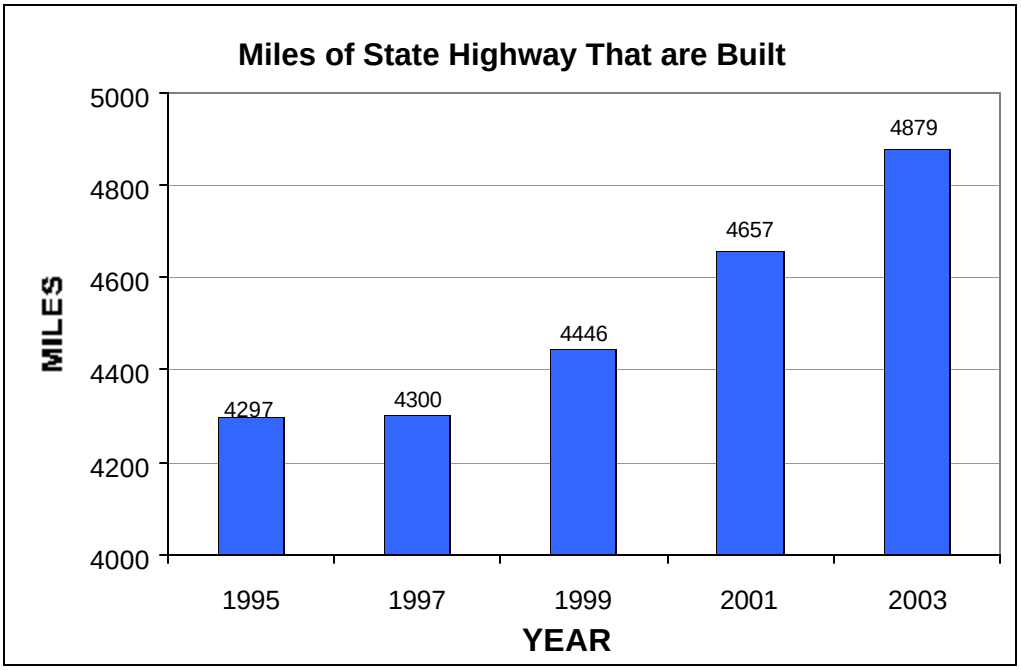
A Built Road

This road has narrow travel lanes, gravel shoulders, poor sight distance (as evidenced by the curve sign in the upper right hand corner), no guardrail protecting the slope to the lake on the left, and no ditches for drainage.

An Unbuilt Road

In May 2000, the 119th Legislature enacted a law that requires MaineDOT to present biennial budgets that will result in the rural arterial highway system being improved to modern design standards within 10 years. Under this initiative, an average of 58 miles of rural arterial highway will need to be improved each biennium. In addition, MaineDOT has a goal of improving the major collector corridors over a 20-year period, which equates to approximately 111 miles of improvement per year. To improve this system be very difficult at present funding levels. As more miles are improved to meet modern standards, these roads become part of the pavement preservation program that strives to keep these roads in good condition, which also requires a significant investment. Roads that cannot be improved due to funding constraints are maintained through the maintenance paving program. This program applies thin pavement treatments (5/8") to unbuilt roads to maintain them in a serviceable condition until they can be improved. The following graphic shows the dramatic progress that has been made in improving the highway system since 1997.

Figure 3.1.3



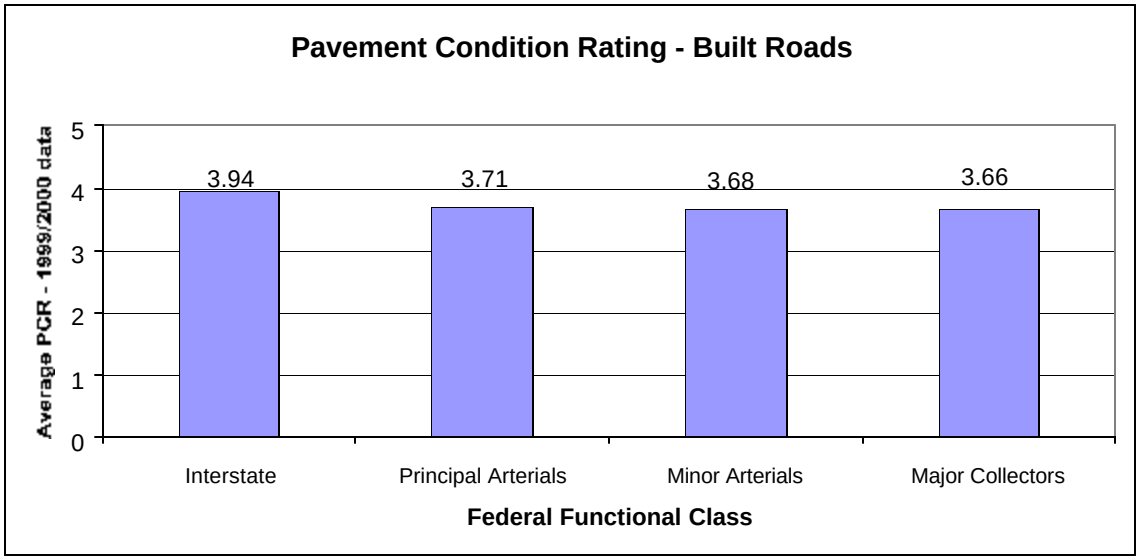
Note: 2003 numbers include the number of miles funded for construction in the 2002-2003 BTIP

3.1.2 Pavement Condition Ratings (PCR) and Road Conditions

The Pavement Condition Rating (PCR) is the key indicator used to determine the optimum time to treat a particular section of road on the built roadway system. PCR is defined as the composite condition of the pavement on a roadway only; it is not necessarily a reflection of the condition of the roadway base structure. The PCR is compiled from the severity and extent of pavement distresses such as cracking, rutting, and patching. The rating system uses a scale of 5.00 (perfect) to 0.00 (fully deteriorated). It is generally most cost effective to treat a road before the PCR drops below a value of 3.0.

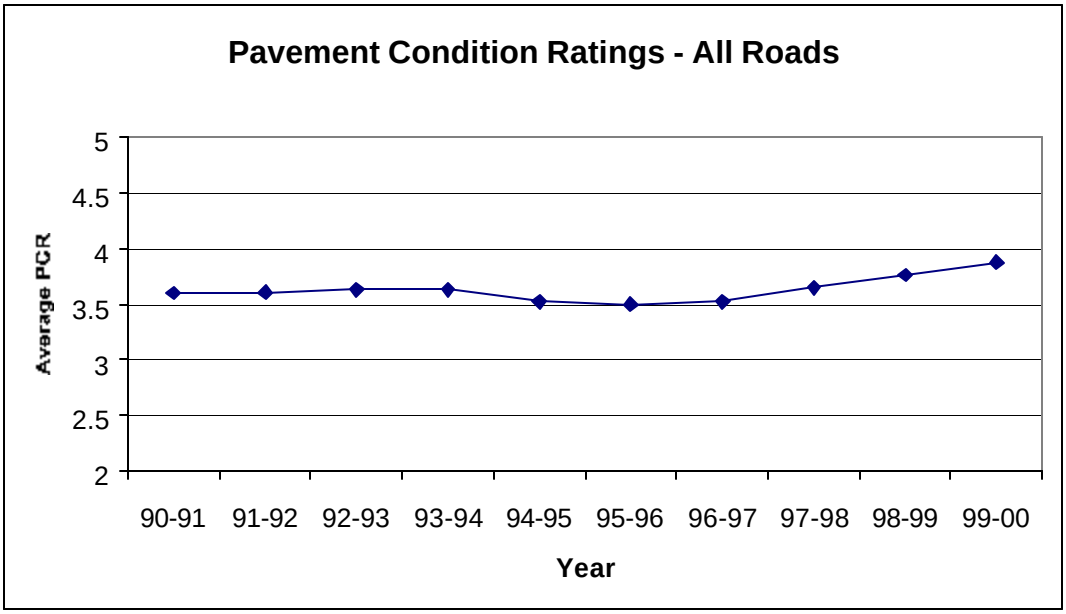
PCR	DESCRIPTION
5	**EXCELLENT** - New or nearly new pavement. Free of cracks, patches or rutting.
4	**GOOD** - Pavement exhibits few, if any, visible signs of surface deterioration. Evidence of initial cracking or rutting.
3	**FAIR** - Visible defects including moderate cracking, distortion and rutting. Some patching may now be present.
2	**POOR** - Pavement deterioration consisting of advanced cracking and severe distortion. Extensive patching and rutting also present.
1	**VERY POOR** - Extremely deteriorated pavement. Defects include severe cracking, distortion, and rutting. Very extensive patching.

Figure 3.1.4



Average PCR values have remained relatively constant over the last 10 years, although there has been an upward trend in PCRs from 96-97 through 99-00. This is most likely due to the fact that beginning in the 96-97 BTIP, the maintenance paving program was roughly doubled from previous BTIPs. This has the effect of improving the short-term rideability of these roads, but does not address structural or other roadway deficiencies. As more roads are constructed to modern standards, the number of miles eligible for the Pavement Preservation Program increases.

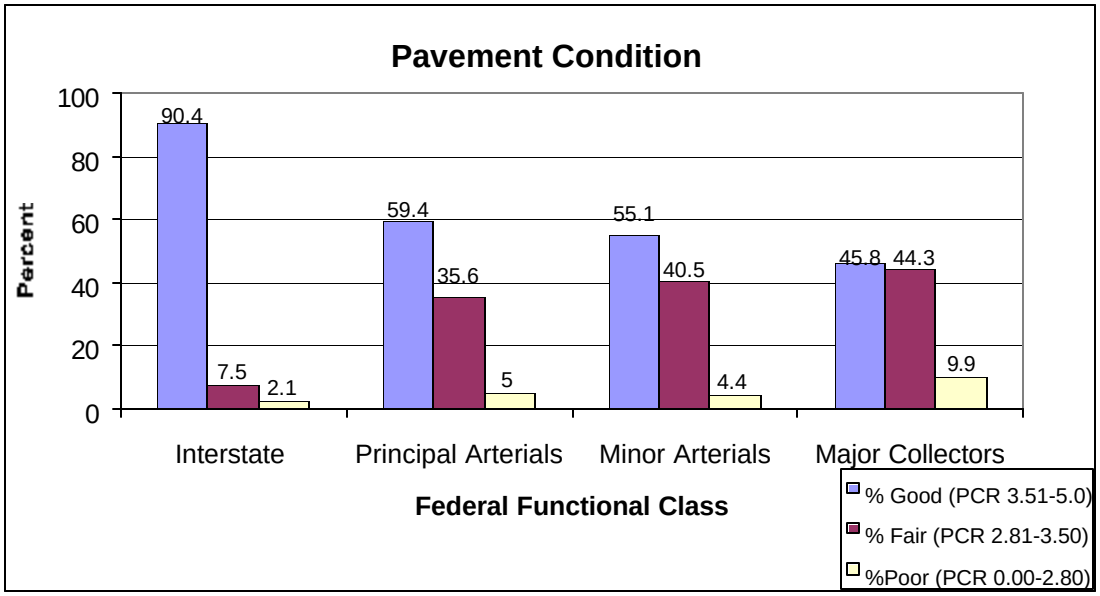
Figure 3.1.5



PCRs do not account for base material, shoulders, drainage or geometric characteristics. A section of unbuilt road could have new pavement as a holding action until rehab or reconstruction can take place. This pavement will have a short lifespan compared to a structural preservation overlay on a built highway.

MaineDOT's pavement preventive maintenance strategy maintains the condition of the built system before expending resources to reconstruct the unbuilt portion of the system. This approach allows more miles of roadway to be treated at a lower dollar cost per mile, thus better maintaining the integrity of the system as a whole. Preventive Maintenance is a more cost-effective method of maintaining the system than treating the 'worst first, and not treating the 'better' roads. Figure 3.1.6 shows the percentage of the state's highway network that is in good, fair, or poor condition. The photos that follow were taken from the ARAN vehicle, which is the Departments data collection vehicle for pavement management purposes.

Figure 3.1.6



Note: Based on 1999-2000 data collected for pavement management purposes.

Good = PCR 3.51 - 5.0

The PCR on this road is good due to the lack of visible cracking, rutting, or surface defects. PCR = 4.0

Fair = PCR 2.81 - 3.50

The PCR on this road is Fair because of minor cracking, but no major rutting or surface distresses. PCR = 3.0

Poor = PCR 0.0 - 2.80

The PCR on this road is Poor due to severe cracking and wheel rutting. PCR = 2.2.

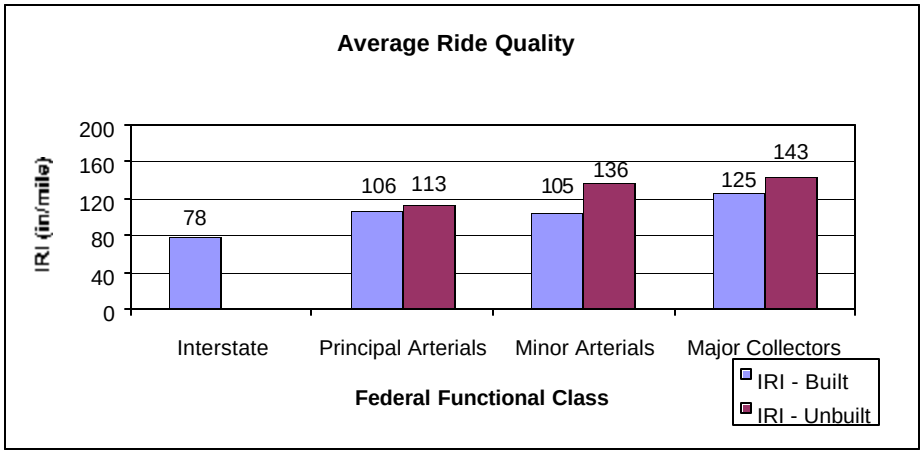
***A*utomated *R*oad *AN*alyzer (*ARAN*)**

ARAN is a data collection vehicle used to gather a variety of information about Maine's highway network while traveling at highway speeds.

3.1.3 RIDE QUALITY (IRI)

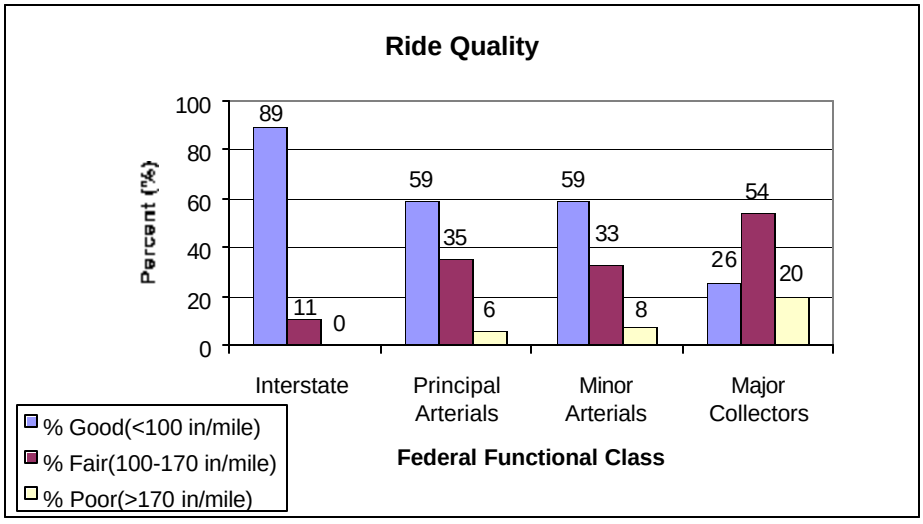
Ride quality is a key indicator of customer satisfaction. It is expressed in terms of the International Roughness Index (IRI) and is measured in inches per mile. It is a measurement of the inches of vertical displacement experienced by a vehicle in one mile of roadway. The lower the IRI, the smoother the ride is. The Federal Highway Administration has determined that an IRI of less than 170 in/mile is an acceptable ride.

Figure 3.1.7



As can be seen in Figure 3.1.7, even the unbuilt system has an acceptable average ride quality, due in large part to the extensive maintenance paving program on these roads. The IRI on Maine's roads range from 47 in/mile to 330 in/mile. Figure 3.1.8 shows the percent of the roads by federal functional class with good, fair, an poor ride. See Table 5.1.4 for a matrix of treatments used on Maine's highways.

Figure 3.1.8



3.1.4 Visitor Information Centers

Maine's existing State Visitor Information Center system includes seven centers and their attendant rest areas. Centers exist on the Turnpike in Kittery and on Interstate 95 in Yarmouth, as well as on Interstate 95 in Hampden and Houlton. Two other existing centers are located in the National Highway System gateway communities of Calais and Fryeburg. Until recently, a facility existed in Bethel; it was owned by the United States Forest Service and operated by the Maine Tourism Association without state funds. See section 5.1.4 for ongoing maintenance and operations cost and needed improvements associated with existing centers, and proposed replacement of the Fryeburg and Bethel facilities along with development of new centers in South Lebanon, Jackman and Madawaska.

Figure 3.1.9 Hampden Visitor Information Center

3.2 Bridge Network

Wiscasset-Edgecomb, Donald Davies Bridge

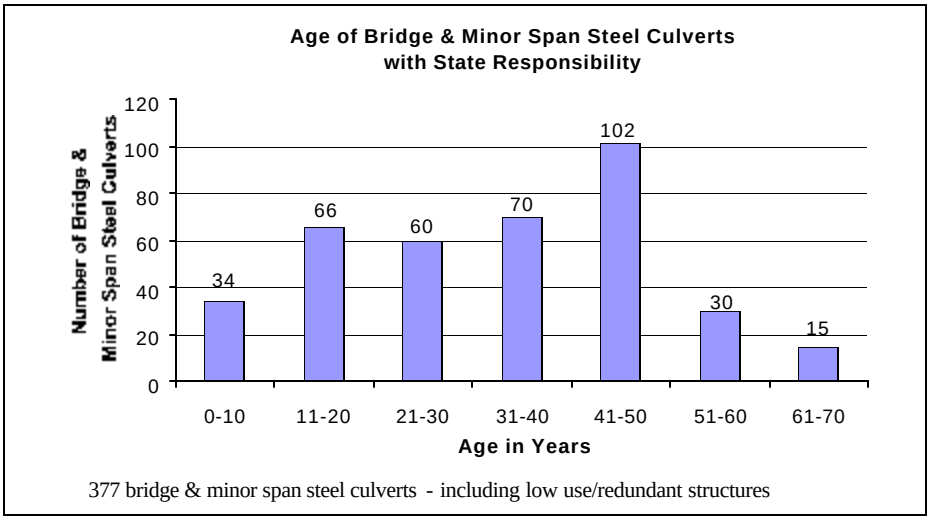
Ownership and maintenance of Maine's bridge and minor span network was modified as a result of a 2001 law (23 MRSA Chapter 9 Bridges, Sub Chapter IV - A Local Bridges). The State of Maine now has full responsibility for capital improvement and maintenance of 769 minor spans (10 feet to 20 feet long) and 1,972 bridges generally equal to or greater than 20 feet in length, including 19 extraordinary bridges. Extraordinary bridges are 250 feet or more in length and require improvements of at least $5 million in the next 20 years. In addition, the state will pay half of the capital improvement costs for 219 low-use/redundant (town maintained) bridges on town ways if a compelling public benefit is demonstrated. There are now 2,960 structures with total or partial state responsibility.

This report examines the state's bridge and minor span network in terms of the following indicators: age, percent sufficient (the percentage of structures with a federal sufficiency rating greater than 60), federal sufficiency rating weighted by deck area; extraordinary bridge needs; and priority functional needs. In aggregate, these indicators provide valuable planning insight for the state's current bridge and minor span inventory. Excluded from this report are: new crossing sites where there has been no bridge construction to date; structures used exclusively for rail, pedestrian or snowmobile traffic; structures owned by the Maine Turnpike Authority, federal agencies, or private entities, and minor spans on town ways owned and maintained by municipalities.

3.2.1 Age of Maine's Structures

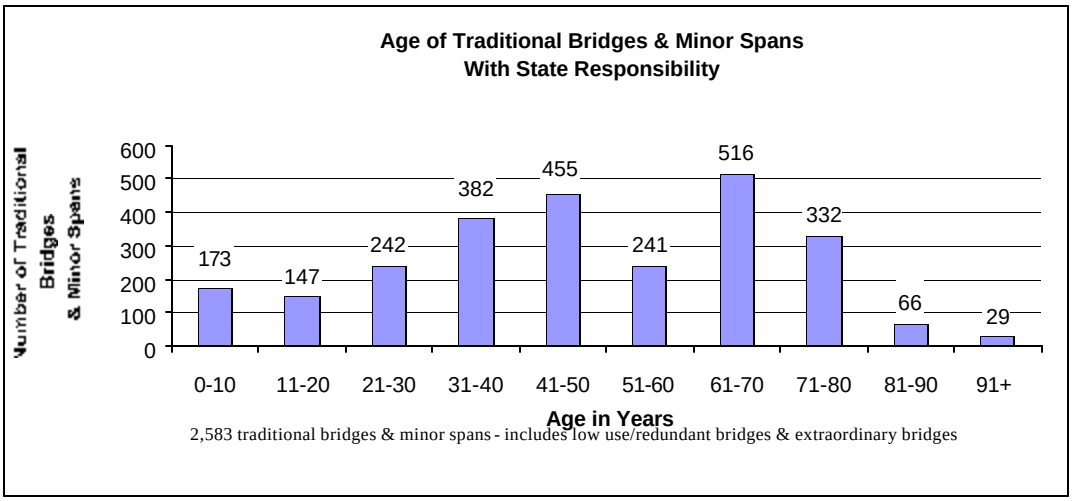
Of the 2,960 structures with state responsibility, 377 are bridge/minor span steel culverts and 2,583 are traditional structures. The steel culverts typically have a service life of about 50 years while the traditional structures normally have a service life of about 80 years. While age is an indicator of future needs, it cannot be solely relied upon to determine the timing of capital improvements because past maintenance actions and environmental considerations influence service life. There were 45 steel culverts that exceeded their normal service life in 2000, and of this number, 16 culverts (35%) have already been programmed for capital improvement.

Figure 3.2.1



Ninety-five of the traditional structures have exceeded their normal service life of 80 years. Of this number, 12 structures (13%) have already been programmed for capital improvement. It should be noted that nearly 20% of the traditional structures with an age greater than 80 years are low-use/redundant bridges.

Figure 3.2.2



3.2.2 Percent Sufficient Method

Federal Sufficiency Rating procedures are used to identify those structures that have a sufficiency rating of greater than 60. This rating means they are structurally and functionally "sufficient" or unlikely to need capital improvements for at least 10 years, except for the possibility of paint or wearing surface work. Tracking the percentage of structures with a sufficiency rating of greater than 60 is a good proxy for the overall condition of Maine's bridges and minor spans.

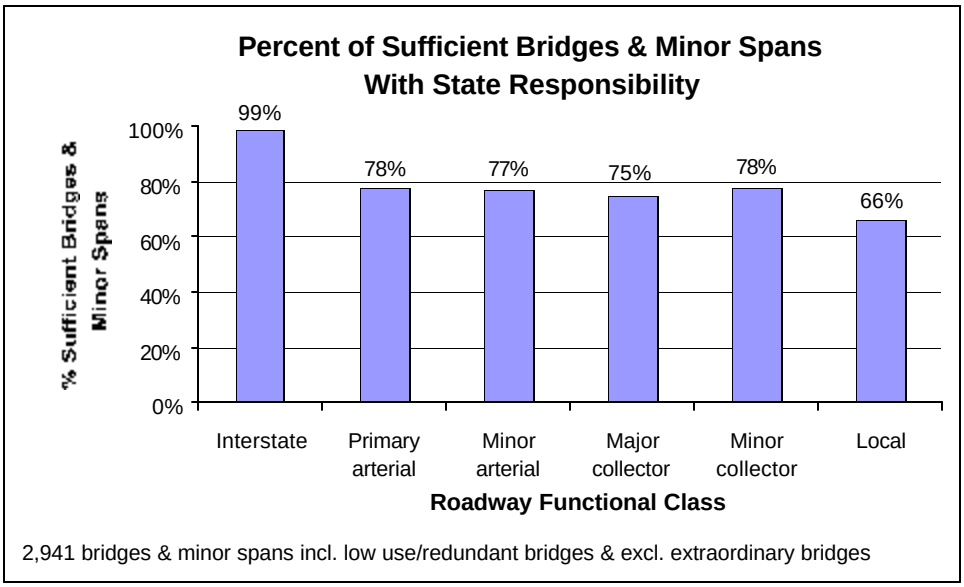
The sufficiency rating is based on a combination of four factors used to determine a number from 0 to 100 (0 is worst, 100 is best) that describes the overall sufficiency of each structure. The four factors are:

1. Structural Adequacy and Safety
2. Serviceability and Functional Obsolescence
3. Necessity for Public Use
4. Special Reductions (detour length, traffic safety features)

3.2.3 Sufficiency of Maine's Bridges and Minor Spans

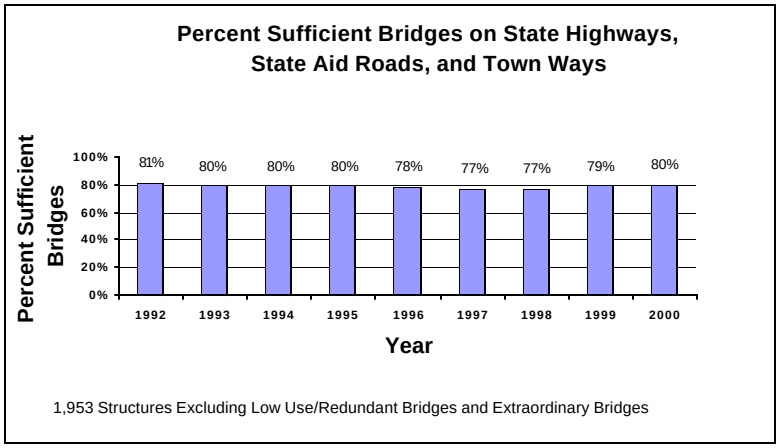
The chart that follows shows the percent of sufficient bridges and minor spans based upon the federal functional class of the roadway (excluding minor spans on town ways and extraordinary bridges). As expected, the vast majority of interstate structures are sufficient, whereas structures on local roads distinctly lag behind all others.

Figure 3.2.3



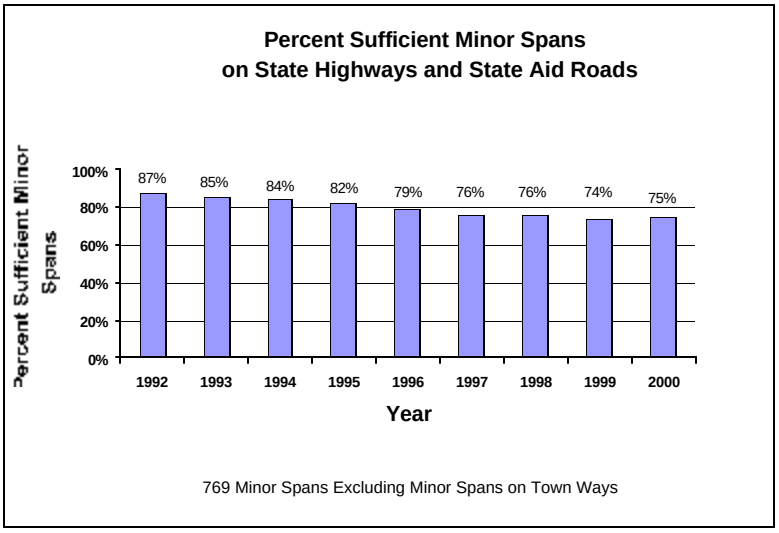
About 65% of the 2,960 structures with total or partial state responsibility are "bridges" on state highways, state aid roads and town ways. These are defined as structures greater than 20 feet in length. They represent the largest and most important piece of the state's roadway structure inventory. The following chart shows that 80% of these bridges are currently sufficient, and that this percentage has been stable for the last decade. (This chart does not include low use/redundant bridges on town ways or extraordinary bridges.)

Figure 3.2.4



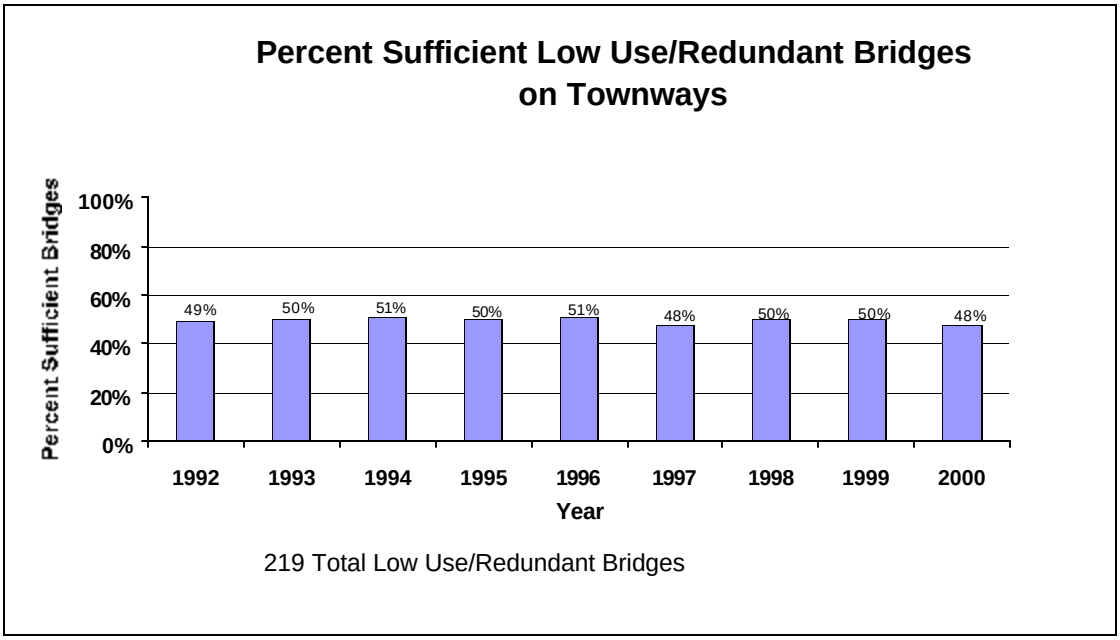
The 769 minor spans on state highways and state aid roads with full state responsibility have experienced a significant downward trend in sufficiency since 1992, as shown in figure 3.2.5. In the year 2000, 75% of the minor spans with state responsibility were sufficient, down from 87% in 1992. The MaineDOT anticipates that about 80 of these minor spans will be candidates for the 2004-2009 Six-Year Plan.

Figure 3.2.5



As a result of the new Local Bridge Law passed in 2001, Maine towns have half the capital improvement responsibility for 219 low-use/redundant bridges on town ways, and full maintenance responsibility for these bridges. As of 2000, 48% of the low use/redundant bridges were sufficient.

Figure 3.2.6



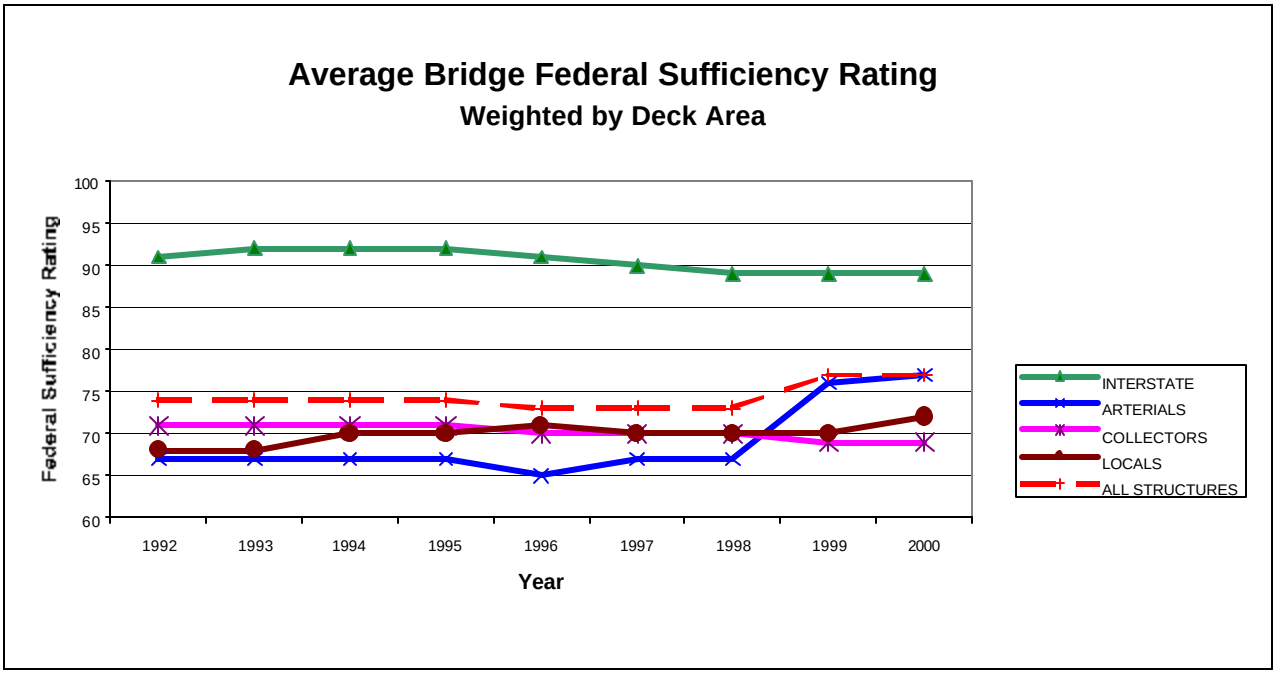
The low priorities associated with low use/redundant bridges, together with anticipated shortfalls in funding, suggest that very few of these bridges will receive financial assistance in the near future. MaineDOT will continue to perform safety inspections on low use/redundant bridges, in order to protect the traveling public.

3.2.4 Bridge Adequacy

Another method of assessing the overall condition and functionality of Maine's structures is to use the average Federal Sufficiency Rating weighted by deck area. Weighting the sufficiency ratings by deck area will more accurately reflect the condition of the total bridge network. More weight is given to the sufficiency ratings of the larger structures representing a larger proportion of the bridge network. As shown in figure 3.2.7, this indicator has proven quite consistent over time, with the exception of a significant increase in 1999 for bridges carrying arterial highways. This increase is attributed to capital improvement projects for eight large structures.

The 1992 to 2000 chart is based on the ratings of all 2,960 structures for which the state has responsibility, including extraordinary bridges and low-use/ redundant bridges.

Figure 3.2.7

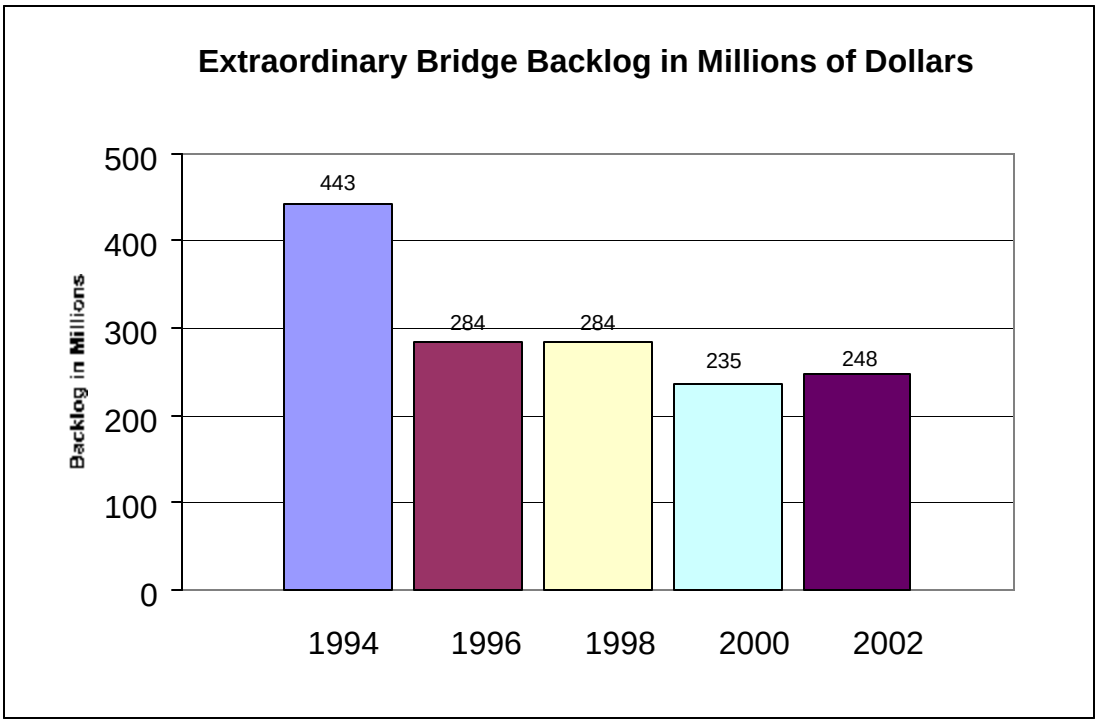


As one might expect, the structures carrying higher federal functional class roadways are in the best condition, reflecting MaineDOT's commitment to funding improvements for those structures that carry the most traffic and thus afford the most benefit to Maine's people and economy.

3.2.5 Extraordinary Bridges

Extraordinary bridges are 250 feet or more in length and have an improvement cost of at least $5 million. MaineDOT has spent between 34% and 44% of its total bridge improvement dollars over the last three biennia to fund projects that address the capital improvement needs of extraordinary bridges.

Figure 3.2.8



While the extraordinary bridge capital improvement needs have been reduced by nearly half over the past 8 years, there still remains an additional $248.4 million worth of work to be done. Extraordinary bridge needs have been identified for the next 20 years and are summarized in Table 3.2.1, along with the cost of the improvement, and the remaining amount of funding required for completion of the work.

Extraordinary Bridge Needs 2002 - 2023

Table 3.2.1

Town	Name	Age Years	Scope	Previous Funding $ Millions	Remaining Need $ Millions
Augusta	Memorial	53	Improvement	0	17
Bath-Woolwich	Carlton Bridge	76	Rehabilitation	25.8	13.875
Bath	West Approach	44	Improvement	0	15
Brunswick-Topsham	Frank J. Wood	71	Improvement	0	9
Canaan	Sibley Pond	63	Replacement	0	7.2
Caribou	Aroostook River	50	Improvement	0	7
Deer Isle-Sedgwick	Deer Isle Sedgwick	63	Improvement	0	19.9
Fort Kent-New Brunswick	International	73	Improvement	0.1	6.9*
Harpswell	Bailey Island	76	Rehabilitation	0	10.95
Howland	Penobscot River	56	Improvement	0	7
Howland	Piscataquis	74	Improvement	0	7
Jonesport-Beals	Beals Island	44	Improvement	0.1	25
Kittery-Portsmouth	Memorial Bridge	81	Rehabilitation	0.3	10.3*
Norridgewock	Covered	74	Improvement	0.2	8.05
Old Town-Milford	Old Town-Milford	72	Replacement	0.7	8.42
Portland-Falmouth	Martin Point	59	Improvement	0	25
Prospect-Verona	Waldo Hancock	71	Rehabilitation	10.4	5.33
Richmond-Dresden	Maine Kennebec	72	Improvement	0	14.5
Portland – S. Portland	Veterans Memorial	47	Improvement	0	31
	Average Age:	**64.2**	**Total Cost:**	**51.3**	**248.4**

*Maine Share Only

3.2.6 Priority Functional Need Bridges

Priority functional need bridges are purely functionally challenged bridges and minor spans. These bridges are functionally obsolete and not structurally deficient. The types of deficiencies include, but are not limited to, structures with insufficient vertical clearance, narrow bridges/minor spans, or structures with poor alignment. Of those structures classified as functionally obsolete, only those with a federal sufficiency rating of less than 60 are considered as potential priority functional need bridges/minor spans. A history of structure-related crashes does increase the possibility that a bridge or minor span will be included in this category, as does substantial public interest in improving the structure for functional reasons.

MaineDOT has identified 32 structures as priority functional need bridges/minor spans according to these criteria. Generally, MaineDOT funds improvements that address structural deficiencies prior to programming improvements solely to correct functional problems. However, safety considerations may allow a structure classified as a priority functional need to compete with a structurally deficient bridge/minor span for funding.

If the roadway and the structure that carries it are both considered functionally deficient, then the timing of the structural improvement may be coordinated with the roadway improvement to achieve cost savings and to minimize disruption to the traveling public.

Prospect-Verona: Waldo Hancock Bridge

3.3 Passenger Transportation

The focus of the MaineDOT Office of Passenger Transportation (OPT) is the movement of people by modes other than single occupancy vehicles, such as buses, trains, airplanes, ferries, vanpools, carpools, walking, and bicycling. OPT plans passenger transportation initiatives and administers federal and state capital and/or operating programs for airports, ferry services, public fixed route and demand response services, passenger rail service, pedestrian and bicycling trails, park and ride facilities, and intermodal facilities. MaineDOT is also developing *Explore Maine*, an integrated system of transportation options to attract visitors to the state without their cars and to provide more travel choices to Maine's citizens.

3.3.1 Transit

Transit is transportation by bus, passenger rail, or other conveyance, either publicly or privately owned, that provides general or special service to the public on a regular and continuing basis. Transit in Maine is provided by buses and vans in both urban and rural areas across the state. Transit service varies from running 7 days per week, 18 hours per day in the larger urban areas to running one day per week in the very rural areas. Service categories are:

- Fixed Route: Service on a fixed schedule and fixed routes.
- Demand Response: Door-to-door service by appointment, often limited to social service clients.
- Intercity: Between urban areas.

Transit operators and their subcontractors provide transit to most cities and towns in the state through grants and contracts. (See Appendix E for a detailed list of providers.) Thirty-two towns and cities receive regularly scheduled service three or more days per week. Many other towns receive service on a weekly basis or on a demand-response basis. Maine is unique in that its transit services in all the rural areas and most of the urban areas are run on a 'community transit' model. Contracts come from the social service community, Medicaid, the Department of Human Services, etc., and are executed by the transit operators. This enables a seamless transit system that services more people more efficiently than separate systems.

New service is being implemented across Maine. In 2002, seasonal transit service in the Bethel ski region began limited operation that combined the diverse offerings of the town of Bethel with the major ski centers in the area. Skiing business interests have shown that bookings are reduced when transit is not a viable option. Other new services being offered include the Island Explorer on Mt. Desert Island, ZOOM commuter bus from Biddeford to Portland, FAST service (15 minute service on Forrest Ave., Portland), free ridership for the Universities of Maine, Wheels to Access Vocation and Education (WAVE), and Rider's Choice employment

transportation systems. Expanded service makes transit a more attractive alternative to driving for many travelers and commuters.

3.3.2 Airports

The Maine State Airport System provides six commercial service airports and 30 municipally owned general aviation airports, as shown in the table below.

Maine State Airport System

Table 3.3.1

Commercial Service[1]	General Aviation[1,2]		
Portland	Auburn-Lewiston	Fryeburg	Norridgewock
Bangor	Belfast	Greenville	Old Town
Augusta	Bethel	Houlton	Pittsfield
Knox County (Rockland)	Biddeford	Islesboro	Princeton
Presque Isle	Caribou	Jackman	Rangeley
Hancock County - Bar Harbor	Deblois	Kingfield	Sanford
	Dexter	Lincoln	South Paris
	Dover-Foxcroft	Lubec	Stonington
	Eastport	Machias	Waterville
	Frenchville	Millinocket	Wiscasset

[1] Total enplanements for the state during 2000 were 917,352

[2] There are 1,200 registered aircraft in the State of Maine

Maine has a total of 48 runways, both commercial and general, with a combined runway pavement length of 197,112 feet. Of these runways:

- 47% are in excellent condition
- 31% percent are in very good condition
- 15% are in good condition
- 4% are in fair condition
- 3% are in poor condition.

Typically airport pavement is considered to have a 20-year lifespan. However, this can be extended by a variety of pavement maintenance activities, including overlays and surface treatments. The average age of the surface pavement on the 48 municipally owned, paved runways in Maine is around 14½ years. Other capital investments include terminals, hangers, and maintenance equipment.

MaineDOT is currently in process of updating the Maine State Aviation System Plan (MSASP), which looks at the "system" of airports in Maine and how those airports meet the needs of the people using air service. The MSASP will provide recommendations to improve the system and guide capital developments on a

statewide basis. Individual Airport Master Plans are also developed to guide capital developments for each individual airport over a twenty-year time line.

3.3.3 Passenger Rail Service

In December 2001, Maine saw the return of passenger rail service with service between Portland and Boston. This service, provided by Amtrak, utilizes about 42 miles of track in Maine from the New Hampshire border to Portland on Guilford Transportation Industries' right-of-way. The upgrade of the 114 mile line form Boston to Portland cost $70M. Maintenance costs are covered in the operating agreement with Guilford Transportation.

The State of Maine owns more than 300 miles of rail lines:

- Union Branch, Portland
- Rockland Branch, Brunswick to Rockland
- Calais Branch, Brewer to Calais
- Belfast & Moosehead Branch, Belfast to Unity
- Augusta Branch, Brunswick to Augusta

By law, MaineDOT cannot operate a railroad and will look to the private sector to provide services on state-owned as well as privately held rail lines.

MaineDOT is currently upgrading the state-owned Rockland Branch rail line from Brunswick to Rockland (56 miles) for passenger and freight use at a cost of approximately $30M. This project is fully funded. Studies are underway to determine the feasibility of restoration of service on the Calais Branch, with expansion to Trenton. An Environmental Assessment is being prepared for upgrades for the Union Branch.

3.3.4 Ferries

Maine is served by a variety of public and private ferry services. The Maine State Ferry Service (MSFS) serves six year-round island communities: Matinicus, Vinalhaven, North Haven, Islesboro, Swans Island, and Frenchboro. Service frequencies vary from nine trips daily to Islesboro to 27 trips a year for Matinicus.

Maine State Ferry Service Vessels

Table 3.3.2

Name	Year Built	Passenger Capacity/Seating	Car Capacity	Service
North Haven *	1959	125/26	9	Matinicus
Everett Libby **	1960	175/50	12	Backup
Gov. Curtis	1968	250/62	30	Vinalhaven
Margaret Chase Smith	1987	226/176	30	Islesboro
Capt. Henry Lee	1992	250/60	17	Swans Island and Frenchboro
Capt. Charles Philbrook	1993	250/60	17	Vinalhaven
Capt. Neal Burgess	1993	250/60	17	North Haven

** In limited service.*
*** Backs up any vessels that are not in service*

The Maine DOT is working to secure funding to replace the Curtis, at a cost of $5.5M. In recent years the MSFS has implemented an aggressive maintenance program for the vessels. In addition, new terminals have been built in Rockland, Vinalhaven, Islesboro, North Haven, Lincolnville, Bass Harbor, and Islesboro. Piers have been refurbished in North Haven, Matinicus, and Vinalhaven and funds have been procured for refurbishing the existing pen (where vessels berth) in Rockland and building an additional one. New pens are needed in Bass Harbor and Swans Island.

Other ferry services in Maine include:

- Casco Bay Island Transit, (CBITD) linking Peaks, Great Diamond, Little Diamond, Long, Cliff, and Chebeague Islands to Portland.
- Chebeague Island Transportation, linking Chebeague Island in Cumberland to Cousins Island in Yarmouth.
- Bay Ferries, seasonal high-speed service between Bar Harbor and Nova Scotia.
- Scotia Prince, seasonal service between Portland and Nova Scotia.
- Numerous privately owned seasonal services to island communities.

The Maine DOT supports CBITD with capital and operating funds and has assisted Cumberland in securing mainland access for Chebeague Island Transportation.

3.3.5 Vanpools/Carpools/Park and Ride Lots

MaineDOT supports a statewide carpool/vanpool matching service through the Greater Portland Council of Governments (1-800-288-RIDE).

MaineDOT and the Maine Turnpike Authority also develops and maintains park-and-ride facilities throughout the state. Park-and-ride lots provide a safe place for commuters to leave their cars for transfers to another mode for the rest of their trip. These park-and-ride lots, which provide more than 2,000 parking spaces for commuters, are owned by the state, Maine Turnpike Authority, local communities, or private entities. They are located at interstate exchanges, on state and municipally owned property, at churches, shopping centers, and on private property. (See Appendix D for details.)

MaineDOT recently opened park-and-ride lots on Route 1 in Waldoboro and Edgecomb in support of proposed rail and bus services between Rockland and Bath Iron Works. Also in the developmental stage are park-and-ride lots in Wiscasset, Newcastle, Warren, Oakland and Skowhegan.

3.3.6 Bicycle/Pedestrian Network

MaineDOT contributes to increased bicycle and pedestrian mobility by constructing paved shoulders, bike lanes, or sidewalks along or within state highways, local streets, and roads, as well as through the construction of shared-use paths.

Sidewalks are a basic element of an urban pedestrian network. Without them, many people are reluctant to walk along the side of the road. Many municipalities have serious gaps in their sidewalk networks, a situation that impedes pedestrian access. In addition, Maine has only a small percentage of sidewalks that meet the Americans with Disabilities Act (ADA) guidelines regarding accessibility for the physically handicapped. Sidewalk construction and maintenance is primarily the responsibility of local municipalities, although MaineDOT provides some funding for new sidewalk construction through its Transportation Enhancements Program, which requires a 20% match. Maine DOT also replaces sidewalks as part of its road improvement projects.

Paved shoulders are essential to bicycle access and safety on rural roads, as well as for driver and pedestrian safety and for maintenance, on most streets and highways. Without paved shoulders, many people are reluctant to bicycle. MaineDOT's Shoulder Surface Policy, established in January 2000, is helping to create more miles of paved shoulders. This policy will convert gravel to paved shoulders for reconstruction or pavement preservation projects on all arterials and

on some major collectors with Summer Average Daily Traffic (SADT) of more than 3,000 cars per day. Under MaineDOT's F.Y. 2002/2003 BTIP, some 250 to 300 miles of gravel shoulders will be converted to paved shoulders. However, there are deficits in the paved shoulder network and it will be decades before all major collectors are built to current standards.

Although there are few miles of bike lanes presently in Maine, they are appropriate on urban streets where adequate width exists. Bike lanes are often important in increasing the percentage of urban bicycling because they provide a greater degree of comfort and safety to the bicyclist. Because bike lanes are primarily located in urban areas, it is primarily the responsibility of the metropolitan planning organization or the local municipality to fund and install them. There is currently a demonstration project for bike lanes in Portland and, if successful, other municipalities will be encouraged to follow suit.

Shared use paths have significantly increased bicycle and pedestrian use and access where constructed because many users desire facilities completely separated from the highway system. There are currently short stretches of shared use path in a few Maine communities totaling approximately twenty miles. While the demand for shared use paths is quite high, their implementation has taken many years primarily due to the lack of funding and responsible managing authority after construction.

MaineDOT has identified three major trail initiatives:

- Mountain Division, 40 miles, Windham to Fryeburg
- Downeast Trail, 144 miles, Brewer to Calais
- Eastern Trail, 55 miles, Kittery to South Portland

Although construction has not yet begun on any of these trails, small amounts of construction funding (less than four miles each) are programmed in the F.Y. 2002/2003 BTIP.

3.3.7 Intermodal Facilities

Intermodal facilities link two or more modes of passenger or freight transportation. The MaineDOT, in partnership with Concord Trailways, has developed an intermodal passenger facility at Sewall Street in Portland. This facility, developed through a public-private partnership, services intercity buses and the Portland to Boston Amtrak service. Concord Trailways, MaineDOT, and the Northern New England Passenger Rail Authority shared the $2.3 million cost for this facility. The municipality, often through public/private partnerships, covers maintenance costs.

Three intermodal passenger facilities are planned at or adjoining the airports in Auburn, Bangor, and Trenton. These facilities will provide park and ride lots and access to air, motor coaches, and passenger services. The Trenton facility is being planned to include a new visitor center for Acadia National Park. These facilities will include income-generating rental space to help defray operating costs of the facility and supporting transit services.

Amtrak Facility Portland

3.4 Freight Transportation

MaineDOT recognizes the increasingly important role of freight transportation in the management and growth of Maine's overall transportation infrastructure and in the promotion of Maine's economic vitality. MaineDOT has made consideration and advancement of freight improvement projects a priority and is following a detailed Integrated Freight Plan in its actions.

3.4.1 Cargo Ports

The state has pursued its Three Port Strategy to support development of cargo ports in Portland, Searsport and Eastport. The Port of Eastport consists of two facilities, the Breakwater Terminal and the Estes Head Terminal. In the late 1990s, the state invested roughly $16 million in the Estes Head Terminal, which provides service for the shipment of value-added forest products to destinations around the world. The Breakwater Terminal is a backup to Estes Head and is positioned to take advantage of Maine's growing cruise ship market. Both terminals also provide benefits to the fishing and aquaculture industries.

The Port of Searsport features private facilities for handling liquid and dry bulk products. The state has begun construction of a new $18 million breakbulk and container terminal in Searsport, which is expected to be in service August 2003. This new terminal will allow Searsport to be a fully intermodal facility with direct access by truck, rail, and water.

The Port of Portland's public facilities serve the needs of the fishing, tourism, and cruise ship industries. Public facilities at the International Marine Terminal also provide weekly container feeder services for imports and exports, and are scheduled to be re-developed. Private facilities in the port handle petroleum, bulk, and breakbulk cargos. A new container crane and warehouse at Merrill Marine Terminal are recent additions of approximately $5 million value.

MaineDOT invests in the marine infrastructure of the state's 142 coastal communities on tidal water through the Small Harbor Improvement Program (SHIP). SHIP is designed for improvements to publicly owned coastal marine infrastructure like piers, boat ramps, float systems, etc. In 1996 and 1997, MaineDOT awarded grants to 43 projects in 38 coastal cities and towns totaling $2.5 million. All projects are matched by a minimum of 25% local funds. These projects are now completed, in use, and of great benefit to the local and marine communities. In 2001, $1.5 million in funds were made available by the Maine Legislature and approved by Maine voters. Twenty-one projects have been selected and initiated in 2002. The goal of these programs is to promote economic development, improve public marine infrastructure, and improve public access to the Maine coast. (See Appendix F)

3.4.2 Freight Rail

Freight railroads are classified based on annual operating revenue as follows:

- **CLASS I** - Annual revenues of greater than $258.5 million
- **CLASS II** - Annual revenues between $40 million and $258.5 million
- **CLASS III** - Annual revenues of less than $40 million.

Maine has no Class I service, but its Class II carriers connect with four Class I railroads in New York, Montreal, and St. Leonard, N.B. The state's Class II railroads, Bangor & Aroostook Railroad Co. (known as BAR and now bankrupt), Guilford Transportation, Inc. (GTI), and St. Lawrence & Atlantic Railroad (SLA), form the core of its regional rail system. The Belfast & Moosehead Lake Railroad, Eastern Maine Railway, and Safe Handling Rail are Class III railroads. These six railroad companies move more than 8 million tons of freight per year over 1,200 miles of active track. Maine has roughly 206 miles of inactive track.

The Bangor and Aroostook Railroad is just emerging from a long and difficult bankruptcy process with a new name, Maine, Montreal and Atlantic (MMA) and new owners. There are three rail/truck intermodal facilities, located in Auburn, Waterville, and Presque Isle. MDOT partnered with local communities, FHWA, and the private rail carriers to build these facilities.

The Auburn facility is served by SLA via its connection to Class I railroad Canadian National. Canadian National's merger with Illinois Central, along with newly developed partnerships with Kansas City Southern and Tex-Mex, opens Maine rail markets to new opportunities that SLA is actively marketing. Additional opportunity for growth has occurred through the development of Mini-Landbridge (MLB) traffic from the Pacific Rim via the port of Vancouver. MLB is generally defined as traffic received over a Pacific coast port with a destination on the U.S. east coast. The SLA, which was recently purchased by Genesee & Wyoming Railroad, is fully cleared for two high cube double-stacked containers between Auburn and Montreal.

The Presque Isle facility is served by BAR/MMA. The traffic moves via BAR/MMA to the Northern Maine Junction, then via GTI to Ayer, MA, from which point it is trucked to Southern New England and Pennsylvania destinations.

The BAR/MMA east-west service is primarily dictated by steamship arrivals and departures at the Canadian ports of St. John, Halifax and Montreal. A small portion of the Canadian port traffic is destined for southern Maine and eastern New England. This traffic moves on the BAR/MMA to Mattawamkeag, where it is interchanged to the GTI system. GTI then delivers the containers to its terminal in Ayer, MA. The route from Mattawamkeag to Ayer is not cleared for double-stacks. Guilford also runs an intermodal service from the Maritimes to US markets.

The Waterville facility is served by GTI. Intermodal service was developed between Worcester, MA and Waterville in the mid-1990s in concert with Conrail. GTI has now developed alternative service routings in concert with CSX and Norfolk Southern. With improving service levels on CSX and Norfolk Southern, GTI expects to grow the intermodal business.

3.4.3 Motor Carrier

As chair of the Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO) Working Group, OFT has supported several initiatives to utilize emerging ITS technologies in commercial vehicle operations. To date, the Working Group has completed an ITS/CVO Business Plan for the state, overseen a project to map motor carrier data files in Maine State Government, and sponsored a Bureau of Motor Vehicles project to tie together the various state motor carrier computer databases using the USDOT numbers as a common identifier in a new relational database, the Unified Motor Carrier Account Management System (UMCAMS). MDOT has begun reconstructing the Kittery and York I-95 weigh scales and new building for improved enforcement interface with UMCAMS and other databases. Installation of an automated vehicle pre-clearance system is planned for both sites. These projects will improve the efficiency of commercial vehicle field inspections and enforcement, allowing more rapid automated clearance of vehicles at enforcement areas and a reduction in the number of staff involved.

MaineDOT has completed a Heavy Haul Truck Network (HHTN) study that has identified major truck freight routes in Maine and provided criteria for evaluating projects that may improve freight flow by truck. MaineDOT/OFT is also managing a Commercial Vehicle Service Plan (CVSP) study that will determine statewide needs for truck rest area facilities. The plan will suggest ways for public-private cooperation in the building and maintenance of truck rest area facilities.

3.4.4 Air Freight

Air freight is a relatively small component of Maine's current freight transportation system, but it is one that is experiencing rapid growth (7 to 10% annually). Air freight is especially important for the transportation of low-weight/high-value commodities, such as semiconductors, and of perishable commodities, such as seafood. These two commodities are important components of Maine's economy and rely on air cargo services. Air freight in Maine moves primarily through the Portland International Jetport, the Bangor International Airport, and the Auburn-Lewiston Municipal Airport. Future investment in warehouse facilities will be necessary as airfreight levels grow.